DICKENS SOLUTIONS

AMENDED
WASTE MANAGEMENT PLAN
(STAGE 1 – Council RFI)

NSW LAND & HOUSING CORPORATION
(DKO ARCHITECTS)

PROPOSED
RESIDENTIAL AFFORDABLE
&
SOCIAL HOUSING DEVELOPMENT
@
2 KAMIRA COURT
VILLAWOOD

AUGUST 2022

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PART 1 – OVERVIEW AND PROPOSAL

1.1 INTRODUCTION

This Waste Management Master Plan (WMMP) describes in detail the manner in which all waste and other materials resulting from the excavation, construction and on-going use of the building on the site are to be dealt with.

The aims and objectives of this WMP are to: -

a) Satisfy all State and Local Government regulatory controls regarding waste management and minimisation practices,
b) Promote the use of recyclable materials in the excavation, construction and on-going operation of the building,
c) Maximise waste reduction, material separation, and resource recovery in all stages of the development,
d) Ensure the design of waste and recycling storage facilities are of an adequate size, appropriate for the intended use of the building, hygienic with safe and manoeuvrable access, and,
e) Ensure that the provision of waste and recycling services to the completed buildings are carried out in an efficient manner, which will not impact negatively on the health, safety and convenience of all stakeholders.

This WMP is prepared in accordance with: -

- Fairfield LEP 2013,
- Fairfield City Wide DCP 2013,
- All conditions of consent issued under the approved Development Application,
- The 'Better Practice Guide for Resource Recovery in Residential Buildings, published by the NSW EPA (April 2019)',
- Current industry standards and practices for the storage and collection of waste within Multi Unit Dwellings and Mixed Unit Developments, and,
- The objective of ensuring that all waste management facilities and collection services will provide an outcome that will be effective and efficient, as well as promote the principles of health, safety and convenience.

This Waste Management Plan has been prepared for the submission of a Development Application to Fairfield City Council for the construction of a ten (10) storey residential building at Kamira Court, Villawood, comprising of:

- 112 x 1, 2 and 3 bedroom units, including private, affordable, LAHC social housing and dual key units,
- 357sqm of community commercial space,
- Car parking on Ground Floor, Level 1 and 2, and,
- Associated infrastructure.

This WMP is dated 3 August 2021.

This WMP has been prepared according to the Architectural Drawings prepared by DKO Architecture:

- Drawing No – DA200 – Ground Floor Plan – Revision A.

1.2 HISTORY

This is an Amended Waste Management Plan (WMP) and is dated 2 August 2022 and has been prepared to address all on-going waste management issues, as a result of correspondence from Council in the form of a Request for Further Information (RFI) dated 18 May 2022, advising that there are a number of waste management issues to be addressed.

These issues are detailed below in **BOLD TYPE TEXT** with specific responses following each item.

Item 1 – Waste Rooms

The bin rooms for commercial waste shall be separated from the domestic waste rooms.

RESPONSE – Both the Architectural Drawings and this Waste Management Plan have been amended to demonstrate that the Residential Waste Storage Area (RWSA) and the Commercial Waste Storage Area (CWSA) are separate areas.

Item 2 – Bin Sizes

Council does not provide 1100L bins. 660L bins are used for this development. Accordingly, the development shall provide suitable waste storage and collection facilities for these types of bins. Accordingly, the bin calculation is to be revised. In addition, two (2) additional bins (660L) are required to be provided as there must always be a bin underneath the chute at all times.

RESPONSE – The Waste Management Plan (WMP) has been amended to indicate that 660-litre mobile waste bins will be used to service all waste bins for the proposed development.

Item 3 – Collection Vehicle Access

The driveway and loading dock shall be designed and constructed for HRVs (25 tonne truck).

RESPONSE – The driveway and loading dock have been designed to accommodate Council's rear loading Heavy Rigid Waste Collection Vehicle with the following dimensions:

- Operational Length – 10.50m,
- Design Width – 2.50m,
- Operational Height – 3.90m, and,
- Swept Circle – 17.0m.

Item 4 – Frequency of Collection Services

The submitted Waste Management Plan (WMP) states that waste services will be provided two (2) days per week and recycling services will be provided one day per week. This is incorrect as garbage is collected on a weekly basis and recyclables are collected on a fortnightly basis. Accordingly, the WMP shall be updated to reflect the correct arrangements and sufficient capacity provided in the storeroom for these services.

RESPONSE – In discussions with Council Officers in relation to the frequency of waste collections, it was advised that although Council normally provides waste collections to residential developments on a weekly basis. Due to the size and scope of the development, consideration is requested to providing these services on a twice weekly basis for waste collection and once weekly for recycling collection.

Given the significant redevelopment of Villawood Town Centre and the upcoming projects to the area, an increased collection would be most appropriate. Stage 2 of the 2 Kamira Ave will be providing an additional 222 residential units to the area, 1 Villawood Road is also now in operation, and there is future residential development also marked for Kamira Court in the very near future.

In this regard it is considered that servicing the bins twice weekly would not be a negative impost on Council's operational process, and moving forward it is likely that large scale developments such as the one proposed would benefit from an increase in collection frequency. Additionally, twice weekly collections would reduce the amount of time it would take to service the bins, as well as reducing WH & S risks, due to the lesser number of bins to be collected. It is therefore requested that Council reconsider its position in this regard and approve the waste collections as proposed.

Once weekly collections will crowd out bin rooms with additional bins and storage required and lead to a larger building maintenance issue and cost to maintain. It is further noted that the waste rooms currently provided have additional surplus bin storage to facilitate any of Council's future waste strategies which the project team is aware may be implemented in years to come.

Item 5 – Bulky Waste Storage Area

Insufficient storage area has been provided for bulky waste. The minimum requirement for bulky waste storage is 26m2. The room provided has an area of 14.4m².

RESPONSE – Both the Architectural Drawings and this Waste Management Plan have been amended to demonstrate that the Bulky Waste Storage Area (BWSA) has an area of 26sqm.

Item 6 – Bin Route

The bin route from bin storage areas to the consolidated bin room shall be indicated in the Architectural Plans.

RESPONSE – The Architectural Drawings and this Waste Management Plan have been amended to demonstrate that all bin routes from storage areas to the consolidated bin rooms are shown on the plans..

Item 7 – Collection Issues

The proposed tree planting on both sides of the driveway off the future extended Howatt Street shall be reviewed as they may obstruct view of the truck driver when the truck enters or exits the site.

RESPONSE – The planting of trees in the area of the driveway will be reviewed to remove any obstruction to sight lines as the vehicle enters and exists the site.

This WMP is dated 2 August 2022 and has been amended to address all of Council's RFI issues.

1.3 PROJECT & PROPERTY DESCRIPTION

PROJECT DESRIPTION	**Ten (10) storey residential buildings (145 residential units – including dual key units).**
NUMBER OF UNITS	**- 80 x 1, 2 and 3 bed room private and affordable housing units,** **- 32 x 1 and 2 bed room social housing units,** **- 357sqm of commercial space,** **- Car parking on Ground Floor, Level 1 and2**
PROPERTY DESCRIPTION	**The development is to be constructed over four (4) existing Torrens Title lots at** **- Lot 37, in DP202006,** **- Lot 39, in DP202006,** **- Lot 381, in DP123437, and** **- Lot 3382, in DP123437, 2 Kamira Close.**
STREET ADDRESS	**2 Kamira Close, Villawood**
AREA	**6,374sqm (including POS)**
LGA	**Fairfield City Council**
ZONING	**Zone R4 – High Density Residential**
PLANNING INSTRUMENTS	**Fairfield LEP 2013** **Fairfield City Wide DCP 2013**

The site is located within the Villawood town centre adjacent to the Villawood railway station and the Sydney suburban south-western railway network.

The land upon which the development is proposed is located on a large parcel of vacant land with frontages to Kamira Court to the east and south, and Kamira Avenue to the west.

The site is approximately 500m west of Villawood Road a major Sydney north-to-south arterial road. The land upon which the development is proposed is in an area with significant diversity in terms of nature, scale and character of buildings and land usage.

The development to the immediate north-west comprise of a number of low rise commercial buildings of varying retail, offices and food premises land use activities. A number of the sites within the immediate location have been identified for their potential to revitalise this area.

The Hume Highway and the junction between Henry Lawson Drive are approximately 1km south of the site.

1.4 APPLICANTS DETAILS

APPLICANT	**NSW Land and Housing Corporation**
ADDRESS	**Level 4, 4 Parramatta Square** **12 Darcy Street, Parramatta. NSW. 2150.**
TELEPHONE	**Mb 0459 836 671 (Mr Peter Brackenreg)**
E-MAIL	**Peter.Brackenreg@facs.nsw.gov.au**

1.5 PROPOSAL

The proposal involves the construction the construction of a ten (10) storey residential building comprising of the following:

- 112 x 1, 2 and 3 bedroom units, including private, affordable and LAHC social housing (145 units in total including dual keys),
- 357sqm of community library and cafe,
- Car parking on Ground Floor, Level 1 and 2, and,
- Associated infrastructure.

Egress from the ground floor will lead onto Howatt Street (to be constructed) on the southern side of the site.

Three (3) floor levels (Ground Floor, Levels 1 and 2) will be used for car parking.

- Areas for lift wells, fire stairs, bicycle racks, and associated amenities; and,
- Waste and recycling storage facilities, chute outlets, and other services.

It is proposed to incorporate garbage chutes for the reception of waste material only. The building has two (2) cores – a north and a south core – one (1) chute system will be provided in each core.

All chute outlets will be provided at various locations throughout the building. These will be described briefly in this WMP Master Plan and in detail in the operational WMP's for each stage of the development.

Appropriate waste storage facilities will be provided to the development.

It is proposed to provide all waste collection services for this development from a dedicated loading bay located on the ground floor as indicated on the Architectural Drawings.

The design of all waste management activities and facilities will be suitable for servicing by Fairfield City Council.

The land is currently vacant.

The project consists of: -

a) The excavation of the site;
b) The construction of the building for Stage 1 only;
c) The provision of associated infrastructure, landscaping, driveways, concrete pathways and other elements of the development; and,
d) The on-going use of the building.

Council requires that the provision of all waste and recycling services to the development, shall be take place from within the site. This Waste Management Plan has been developed on that basis.

PART 2 – DEMOLITION

2.1 DEMOLITION - GENERALLY

The land is essentially vacant with the exception of a portion of Kamira Court that runs West to East, to be demolished.

PART 3 – CONSTRUCTION

3.1 CONSTRUCTION – GENERALLY

Upon completion of all excavation works, construction of the building will commence. All materials sourced from these activities will be disposed of in accordance with the information provided in Part 3.2 on pages 9, 10, 11, 12, 13 and 14 of this WMP.

Additionally, all materials used in the construction of the building that are not required to be incorporated into it, shall be recycled, reused or disposed of in accordance with these provisions, and the requirements of the Protection of the Environment Operations Act (1997). It will be the developer's overall responsibility to ensure compliance in this regard.

Mobile Bins of an appropriate size will be located on site for the collection of food scraps, beverage containers, and other waste generated on site by workers.

3.2 CONSTRUCTION – RECYCLING, REUSE & DISPOSAL DETAILS

The following details prescribe the manner in which all materials surplus to the construction of the building will be dealt with, and includes: -

a) An estimate of the types and volumes of waste and recyclables to be generated;
b) A site plan showing sorting and storage areas for construction waste and vehicle access to these areas (see Part 3.3 of this Plan);
c) How excavated and other materials surplus to construction will be reused or recycled and where residual wastes will be disposed (see below); and,
d) The total percentage of waste surplus to construction to be reused or recycled.

1. Excavated Materials

Volume / Weight	155,000 cubic metres / 263,500 Tonnes (Estimation – to be finalised on completion of MRC final estimation)
On Site Reuse	Yes. Keep and reuse topsoil for landscaping. Shore on site. Use some for support of retaining walls (Excavated Materials are only to be used if the material is not contaminated or has been remediated in accordance with any requirements specified by any Environmental Consultancy engaged to carry out any contamination assessment of excavated material).
Percentage Reused or Recycled	To be determined (see above comments)
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

2. Bricks

Volume / Weight	10 cubic metres / 10 Tonnes
On Site Reuse	Clean and remove lime mortar from bricks. Re-use in new footings. Broken bricks for internal walls. Crush and reuse as drainage backfill. Crushed and used as aggregate.
Percentage Reused or Recycle	75% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

3. Concrete

Volume / Weight	10 cubic metres / 24 Tonnes
On Site Reuse	Existing driveway to be retained during construction. Crushed and used as aggregate, drainage backfill.
Percentage Reused or Recycled	60% - 75%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

4. Timber

Volume / Weight	10 cubic metres / 4 Tonnes
On Site Reuse	Re-use for formwork and studwork, and for landscaping
Percentage Reused or Recycled	65% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

5. Plasterboard & Fibro

Volume / Weight	20 cubic metres / 6.5 Tonnes
On Site Reuse	Nil – All to be processed off-site
Percentage Reused or Recycled	To be determined
Off Site Destination	Ecocycle, 155 Newtown Road, Wetherill Park (Tel 02 0757 2999) or, Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

6. Metals / Steel / Guttering & Downpipes

Volume / Weight	15 cubic metres / 3.75 Tonnes
On Site Reuse	No
Percentage Reused or Recycled	60 – 90%
Off Site Destination	Sydney Wide Scrap Metal, 4/18 Alfred Street, Chipping Norton (Tel 9738 9771) or, Boral Recycling, 3 Thackeray Street, Camelia (Tel 9529 4424) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

7. Roof Tiles / Tiles

Volume / Weight	8 cubic metres / 6 Tonnes
On Site Reuse	Broken up and used as fill.
Percentage Reused or Recycled	80% - 90%
Off Site Destination	Obsolete Tiles, 3 South Street, Rydalmere. (Tel 02 9684 6333) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

8. Plastics

Volume / Weight	6 cubic metres / 1 Tonne
On Site Reuse	Nil
Percentage Reused or Recycled	80% - 95%
Off Site Destination	Ecocycle, 155 Newtown Road, Wetherill Park (Tel 02 0757 2999) or, Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646). or, Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711)

9. Glass, Electrical & Light Fittings, PC items

Volume / Weight	6 cubic metres / 1 Tonne
On Site Reuse	No
Percentage Reused or Recycled	70% - 90%
Off Site Destination	To an approved agency, or agencies.

10. Fixture & Fittings (Doors Fittings, Other Fixtures, etc.)

Volume	25 cubic metres / 8 Tonnes
On Site Reuse	Broken up and used as fill.
Percentage Reused or Recycle	80% - 90%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711)

11. Pallets

Volume / Weight	50 cubic metres / 16 Tonne
On Site Reuse	No
Percentage Reused or Recycle	90% - 100%
Off Site Destination	To an approved agency, or agencies, for reuse and resale.

12. Residual Waste

Volume / Weight	16,000 cubic metres / 16,000 Tonnes
On Site Reuse	No
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)
Notes on calculation of volume of residual waste	1. In calculating the amount of residual waste produced, it is estimated that approximately 10% of it, will be residual waste. 2. As all of the materials vary in weight per volume, a figure of 1 cubic metre of material is equal to 1 tonne in weight has been used.

It is noted that the quantities of materials detailed in this section (Part 3.2) are estimates only, based on current industry standards and quantity analysis, and may vary due to the prevailing nature of construction constraints, weather conditions, and any other unforeseeable activities associated with the construction of the buildings, which are beyond the control of the developer, including but not being limited to theft, accidents, and other acts of misadventure.

Notwithstanding any of the above, the developer will provide Council with all details in relation to any major variations in this regard.

The developer will keep a record of all documentation associated with the transportation, disposal and processing of all materials surplus to construction.

Should any of the facilities nominated above, for any reason be unable to accommodate the receipt of these materials, the developer will be responsible for making alternative arrangements that will ensure that all materials excess to construction requirements, that are removed from the site are disposed of, or processed, appropriately.

Additionally, during the construction of the building, every effort will be made to reduce and minimise the amount of building materials excess to its construction.

3.3 CONSTRUCTION – ON SITE STORAGE OF MATERIALS

During the construction of the building, an area will be set aside on the site as a compound for the on-site storage of materials prior to their removal from the site. This compound will provide for: -

- Material sorting;
- Segregation of materials that may be hazardous and which will be required to be disposed of;
- Recovery equipment, such as concrete crushers, chippers, and skip bins;
- Material storage; and,
- Access for transport equipment.

Appropriate vehicular access will be provided on and off site, and to the compound, to enable the efficient removal of reusable, recyclables, and waste materials.

Prior to the commencement of construction works, the developer will provide Council with a 'Site Plan for the On-Site Storage of Materials at Construction'. This plan will show in detail the location of each area within the compound, set aside for the segregated storage of all materials involved in the demolition of all buildings on the site.

3.4 CONSTRUCTION – EXCAVATED MATERIAL

All excavated material removed from the site, as a result of any activities associated with the construction of the building, must be classified in accordance with the Department of Environment, Climate Change and Water NSW Waste Classification Guidelines prior to removal, transportation and disposal to an approved waste management facility.

All relevant details must be reported to the PCA.

PART 4 – GARBAGE CHUTE SYSTEM

4.1 CHUTE DESIGN REQUIREMENTS

Garbage Chute Systems will be incorporated into the building design.

The chute system will be for the disposal of waste material only.

The building is separated into two (2) cores. A North Core and a South Core. A chute will be provided for both cores.

All waste deposited into the chute will discharge into 1 x 660-litre bin positioned under the chute outlet point of a 2 x 660-litre mobile bin linear track system.

The North Core of the building services all units and apartments from the ground floor to Level 9, as indicated on the Architectural Drawings – a total of 72 units, including dual key units.

The South Core services all units from the ground floor to Level 9, as indicated on the Architectural Drawings – a total of 72 units, including dual key units.

Waste and Recycling Compartments will be located on each residential floor in each core for residents to deposit their waste (into the chute) and recyclables (into a 240-litre bin located next to the chute).

Details of all chute and recycling systems are described in Parts 4.2 and 4.3 on the following pages.

4.2 CHUTE SYSTEMS – NORTH CORE

Waste and Recycling Compartments for all 72 units in the North Core are located on the northern side of the Lobby next to the Fire Stair as indicated on the Architectural Drawings.

Each waste and recycling compartment will have approximate internal dimensions of 1.5m x 0.8m, with an area of 1.2sqm, and will provide space for: -

- A Garbage Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment; and,
- 1 x 240-litre mobile recycling bin positioned next to the chute.

Residents will deposit waste material into the chute inlet hopper, labelled ‘Waste Chute – Reception of Garbage Only’. All waste from the chute will discharge into 1 x 660-litre mobile bin positioned under a 2 x 660-litre waste bin linear track system under the chute outlet point. It should also be noted that residents on Level 2 of this core will be required to walk through two (2) sets of doors and cross through the car park toa access the chutes. A stop sign, and line markings is proposed for pedestrian safety (see Architectural Drawings and Traffic Report for further details.

Based on Council’s waste generation rates (120-litres of space per unit per week), it is anticipated that all 72 units in this core will generate 8,640-litres of waste per week, or 1,232.29-litres per day.

With the capacity of the linear system being 1,350-litres, the chute system will be inspected at least one (1) time per day in order to ensure that waste receptacles will be removed when full.

Full waste bins will be removed from under the Chute outlet and replaced immediately with an empty one.

The full 660-litre waste bins will be transferred to the waste bin storage area of the Consolidated Bin Room, where they will be stored for servicing.

The Building Manager / Caretaker will monitor all activities associated with the use and operation of the Chute System and the depositing of waste into it, in order to ensure that there will be no spillage as a result of these activities.

4.3 CHUTE SYSTEMS – SOUTH CORE

Waste and Recycling Compartments for all 73 units in the South Core are located on the northern side of the Lobby next to the Fire Stair as indicated on the Architectural Drawings.

Each waste and recycling compartment will have approximate internal dimensions of 2.0m x 0.8m, with an area of 1.6sqm, and will provide space for: -

- A Garbage Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment; and,
- 1 x 240-litre mobile recycling bin positioned next to the chute.

Residents will deposit waste material into the chute inlet hopper, labelled 'Waste Chute – Reception of Garbage Only'. All waste from the chute will discharge into 1 x 660-litre mobile bin positioned under a 2 x 660-litre waste bin linear track system under the chute outlet point.

Based on Council's waste generation rates (120-litres of space per unit per week), it is anticipated that all 73 units in this tower will generate 8,760-litres of waste per week, or 1,251.43-litres per day.

With the capacity of the linear system being 1,350-litres, the chute system will be inspected at least one (1) time per day in order to ensure that waste receptacles will be removed when full.

Full waste bins will be removed from under the Chute outlet and replaced immediately with an empty one.

The full 660-litre waste bins will be transferred to the waste bin storage area of the Consolidated Bin Room, where they will be stored for servicing.

The Building Manager / Caretaker will monitor all activities associated with the use and operation of the Chute System and the depositing of waste into it, in order to ensure that there will be no spillage as a result of these activities.

4.4 OPERATIONAL REQUIREMENTS – BOTH CHUTES

At a minimum, each Garbage Chute System will be designed to meet the following requirements: -

1. Chutes and service openings must be constructed of metal or other smooth faced, durable, fire resistant and impervious material of non-corrosive nature.
2. Chutes will be cylindrical in section with a minimal internal diameter of 500 mm. The diameter around each chute will be a minimum width of 750 mm to allow for infrastructure fittings, such as fixing brackets and noise insulation.
3. Chutes will be vertical without bends or “off-sets” (except for the chute outlets) and not be reduced in diameter.
4. The Chutes and service openings must be capable of being easily cleaned.
5. Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.
6. The Garbage Chute systems must comply with the relative provisions of the Building Code of Australia, and relevant Australian Standards (e.g., AS1530.4-2005).
7. Upon the appointment of the company selected to install the chutes, and completion of the chute design, Council will be provided with a manufacturers specification of all chute systems.
8. The chute discharge points will be restricted to residents by a caged enclosure in order to prevent injury, and will be provided with suitable circulation space, in accordance with the manufacturers’ specification.

Bins will be manoeuvred though the development by an approved bin towing device.

All bin rooms and waste and recycling compartments will be inspected daily in order to ensure that 660-litre waste bins will be removed when full.

Full waste bins will be removed from under Chute outlet compartments and replaced immediately with an empty one.

4.5 ON GOING MANAGEMENT & MAINTENANCE OF CHUTE SYSTEM

4.5.1 Generally

The Owners Corporation will be responsible for all issues associated with the on-going management and maintenance of the Garbage Chute Systems and all activities associated with it.

These activities will include, but not be limited, to the following: -

a) Displaying signage indicating appropriate use of all waste management systems, including what is and what is not recyclable.
b) Educating residents in the correct use of the chute, and the need to keep bulky items out of the chute systems.
c) Providing regular maintenance, including cleaning and unblocking chutes.
d) Regular inspection of the Garbage Chute Compartments, the Garbage Chute Outlet Compartments, and the Bin Rooms to ensure that all waste and recyclables are managed appropriately.
e) Educating residents in the correct use of each chute, to ensure that waste material is not deposited into the recycling chute, and that recycling material is not placed into the waste chute.

4.5.2 Bin Room Infrastructure

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all bin rooms: -

a) Suitable door access for the service of bins;
b) Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
c) All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
d) The floor will be graded to a central drainage point connected to the sewer;
e) Rooms will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2019.
f) Rooms are to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
g) Incorporation of adequate light and ventilation in accordance with requirements of the BCA 2019.

4.6 MANAGEMENT OF RECYCLING

Residents will place their recycling material into the 240-litre mobile recycling bin located in the waste and recycling compartment on that level of the building.

A representative of the Owners Corporation will be responsible for transporting full 240-litre mobile bins from the compartment on each floor of the building into the recycling bin storage area of the Consolidated Bin Room on the ground floor.

An empty 240 litre mobile recycling bin will be placed in the waste and recycling compartment when a full one is removed.

Servicing and replacement of 240 litre recycling bins located in the waste and recycling compartments on each residential level of the building will take place on a regular basis to avoid hygiene, spillage and dumping problems.

All waste handling activities (including the transfer of recycling bins) will be undertaken by representatives of the Owners Corporation.

PART 5 – ON GOING USE OF BUILDING

5.1 OBJECTIVES

1. To ensure that the storage, amenity and management of waste is sufficient to meet the needs of the development.
2. To ensure that all waste management activities are carried out effectively and efficiently, and in a manner, that promotes the principles of health, safety and, convenience.
3. To promote waste minimisation practices.

5.2 ASSUMPTIONS

In preparing this Plan, the following assumptions have been made: -

1. The project involves the construction of a ten (10) storey residential building comprising of 112 x 1, 2 and 3 bedroom units, including private, affordable, LAHC social housing and dual key units, 357 sqm of community and commercial space (café), and car parking on the Ground Floor, Levels 1 and 2.
2. The building is separated into two (2) cores, a North Core and a South Core.
3. Garbage Chute Systems will be incorporated into the building design for both cores.
4. The chute system will be for the disposal of waste material only.
5. The North Core of the building services all 72 units, including dual key units.
6. The South Core of the building services all 73 units, including dual key units.
7. Both cores of the building have access to the waste chutes and recycling compartments.
8. Waste and Recycling Compartments will be located on each residential floor in each core of each building for residents to deposit their waste (into the chute) and recyclables (into a 240-litre bin located next to the chute).
9. All waste deposited into the waste chutes will discharge will discharge into a 2 x 660-litre mobile bin linear track system provided in two (2) separate bin/chute rooms located on the Ground Floor as indicated on the Architectural Drawings.
10. All full 660-litre waste bins will be transferred from the respective bin/chute rooms into the waste bin storage area of the Consolidated Bin Room, where they will be stored for servicing.
11. All full 240-litre waste bins will be transferred from the respective bin/chute rooms into the waste bin storage area of the Consolidated Bin Room, where they will be stored for servicing.
12. In order to meet Council's servicing requirements, all waste material for all units in both cores of both buildings will be stored in 14 x 660-litre mobile waste bins.
13. In order to meet Council's servicing requirements, all recycling material for all units in both cores of both buildings will be stored in 25 x 240-litre mobile waste bins.
14. Fairfield Council does not provide a green waste service to developments such as this. As such it will be the responsibility of the Owners Corporation to dispose of all green waste appropriately.
15. All waste and recycling generation rates were obtained from discussions with and advice from Council staff, as Council's DCP does not specifically provide information on them.
16. Waste services will be provided two (2) days per week.
17. Recycling services will be provided one (1) day per week.

18. All waste and recycling collections will take place from dedicated loading bay located adjacent to the Consolidated Bin Room as indicated on the Architectural Drawings.
19. The Owners Corporation will appoint a dedicated Building Manager or Caretaker, whose responsibility it will be to will monitor and manage all waste management facilities and activities.
20. All bins will be presented for servicing and returned to the Consolidated Bin Room after servicing.
21. Fairfield City Council will provide all waste and recycling services to the development.
22. A Communal community facility is located on the ground floor.
23. Separate waste management arrangements will be provided to the facility.

5.3 WASTE HANDLING & MANAGEMENT

A cabinet will be located within each residential unit so that a receptacle, or receptacles, may be stored or housed in a convenient and practical location within the unit, for the reception of waste and recyclable material.

All residents will be responsible for transporting and depositing their waste and recycling material into the chute and recycling compartments on the respective floor levels where their units are located.

All waste and recyclables should be appropriately bagged or wrapped prior to being deposited into the designated bin.

Appropriate signage will be erected in prominent locations throughout the building to assist residents in placing their waste and recyclables into the appropriate bins.

Access to the Consolidated Bin Room is restricted to the Building Manager or their authorised representatives as well as members of Council's collection team. Resident access is not permitted.

5.4 WASTE & RECYCLING – SERVICE REQUIREMENTS

All waste and recycling materials will be stored in approved receptacles of an appropriate size as specified in this WMP. The lids of the bins shall be closed at all times to reduce litter, stormwater pollution, odour, and vermin.

The Council in general requires that colour coded receptacle lids that distinguish each service component are to be provided: -

- Waste Service – Red Lidded receptacle; and,
- Recycling Service – Yellow Lidded receptacle.

No formal green waste service will be provided to the building. All green waste will be disposed of privately by a contractor to be appointed by the Owners Corporation.

It will be the responsibility of the Owners Corporation to ensure that all green waste is removed from the complex in an appropriate manner.

5.5 WASTE & RECYCLING – SERVICE ARRANGEMENTS

The following table (Table 1) specifies the criteria for waste and recycling generation rates (as specified by Fairfield City Council) based on: -

- Waste – 120 litres of bin space per unit per week; and,
- Recycling – 40 litres of bin space per unit per week.

All waste and recycling generation rates were obtained from discussions with and advice from Council staff, as Council's DCP does not specifically provide information on them.

TABLE 1 – RESIDENTIAL WASTE & RECYCLING GENERATION RATES

SERVICE TYPE	UNITS	BIN SPACE PER UNIT	TOTAL SPACE REQUIRED	BINS SIZE	SERVICES PER WEEK	BINS REQUIRED	BINS PROVIDED
Waste	145	120	17,400	660	2	13.19	14
Recycling	145	40	5,800	240	0.5	24.17	25

TABLE 2 – PROPOSED SERVICING ARRANGEMENTS

WASTE	RECYCLING
14 x 660-litre bins Two (2) Services per Week	25 x 240-litre bins One (1) Service per Week

It is also noted that in discussions with Council Officers in relation to the frequency of waste collections, it was advised that although Council normally provides waste collections to residential developments on a weekly basis, due to the size and scope of the development, consideration would be given to providing these services on a twice weekly basis.

It is also understood that the area in which the project is proposed is undergoing significant transition in terms of a significant increase in the number of large scale mixed use residential and commercial developments of a size and scale similar to the one proposed including two (2) additional stages in this precinct. In this regard, Council has indicated that it me nay need to review of its operational processes, which may involve an increase in its capacity to provide mor frequent waste and recycling services.

It is therefore considered that providing more frequent waste services to this project would be a distinct possibility, which would provide operation benefits to both Council and the Applicant. Accordingly, it is requested that Council reconsider its position in relation to its service frequency and provide twice weekly waste collection services to the project.

5.6 PROVISION OF WASTE & RECYCLING SERVICES

5.6.1 Waste and Recycling Collection Service Provider Details

Fairfield City Council will provide all waste and recycling services to the building.

5.6.2 Details of Mobile Containers

In relation to the size and design of the waste and recycling mobile bins, the following technical information is provided: -

CONTAINER TYPE	HEIGHT (metres)	DEPTH (metres)	WIDTH (metres)
240-litre mobile container	1.080	0.735	0.585
660-litre mobile containers	1.270	0.850	1.370

In addition to the 14 x 660-litre mobile waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 660-litre mobile waste bins in order to ensure that bins are provided at all times below the Garbage Chute Outlets.

Similarly, in addition to the 25 x 240-litre mobile recycling waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 240-litre mobile recycling in order to ensure that bins are provided at all times in the Recycling Compartments.

5.6.3 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	14 x 660-litre mobile containers	Twice Weekly
Recycling Service	25 x 240-litre mobile containers	Weekly

5.6.4 Mobile Bin Towing Device

A Mobile Bin Towing Device, of an appropriate size and approved type, will be provided to transport and manoeuvre bins through the development. A trailer will be used to assist in moving the bins.

Each approved Mobile Bin Towing Device will be designed and manufactured to transport a minimum of 4 x 660-litre waste bins, and up to eight (8) x 240-litre recycling bins (with the trailer), with a weight of 1,200kg's.

A manufacturers specification of both the towing device and trailer will be provided to Council.

The trailer will be attached to the towing device, where required, to assist in the transporting the bins over large basement areas.
Bins will be attached directly to the towing device, or attached to the trailer for towing, depending upon the bin size.

The bins will be transported to and from the bin/chute rooms along ground floor to the Consolidated Bin Room on the ground floor.

The towing device will be stored in a secure location indicated on the Basement 1 Floor Plan.

Prior to occupation, a Risk Management Assessment will be undertaken to determine the most convenient and safest method of transporting the bins.

As a result of the Risk Management Assessment, the Owners Corporation will develop and document an Operational Procedure for the transportation of all mobile bins throughout the development. A copy of this procedure will be provided to Council upon request.

5.6.5 Location, Design, and Construction of Bin/Chute Rooms, Storage and Collection Areas

Details of all waste storage facilities are listed below.

5.6.5.1 Waste and Recycling Compartments

Waste and Recycling Compartments are provided on all residential floor levels in each core of both buildings. The compartments are located as indicated on the floor plans for each building.

All compartments in both cores will have approximate internal dimensions of 1.0m x 1.0m, with a floor area of 1.0sqm, and will provide space for the garbage chute compartment, which will have internal dimensions of 750 mm x 750 mm and will be installed within these confines in a fire rated compartment.

All Recycling Compartment in both cores are located immediately next to the waste compartment and will have approximate internal dimensions of 1.0m x 1.0m, and will provide space for 1 x 240-litre recycling bin.

5.6.5.2 Bin/Chute Room – Northern Core

For the Northern Core of the building, all waste deposited into the Waste Chute will discharge into 1 x 660-litre mobile bin positioned on a 2 x 660-litre mobile bin linear track system under the chute outlet point.

The Bin/Chute Room is located in the northern side of the ground floor adjacent to the Electrical Room and Fire Stairs. It has an area of 28sqm.

5.6.5.3 Bin/Chute Room – Southern Core

For the Southern Core of the building, all waste deposited into the Waste Chute will discharge into 1 x 660-litre mobile bin positioned on a 2 x 660-litre mobile bin linear track system under the chute outlet point.

The Bin/Chute Room is located in the southern side of the ground floor adjacent to the driveway into the basement. It has an area of 16sqm.

5.6.5.4 Consolidated Bin Room

All full waste and recycling bins will be transferred from their respective locations to Consolidated Bin Room where they will be stored for servicing. The bin room has an area of 39sqm and will provide storage space for:

- 14 x 660-litre mobile waste bins, and,
- 25 x 240-litre mobile recycling bins.

All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.

Natural and mechanical ventilation will be required to be installed within the WSA in accordance with the relative provisions of the Building Code of Australia.

5.6.5.5 Waste Collection Area Loading Bay

All waste and recycling services will be carried out from a dedicated loading bay located adjacent to the Consolidated Bin Room.

The loading bay has been designed to accommodate Council's rear loading Heavy Rigid Waste Collection Vehicle with the following dimensions:

- Operational Length – 10.50m,
- Design Width – 2.50m,
- Operational Height – 3.90m, and,
- Swept Circle – 17.0m.

In assessing the size and design of each area of this area, it is considered that it is of a sufficient size and dimension to adequately store and manoeuvre (for collection and return) all of the required number of bins and ancillary facilities.

All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.

Natural and mechanical ventilation will be required to be installed within each Garbage Room in accordance with the relative provisions of the Building Code of Australia.

All collection and servicing activities will take place wholly within the confines of the loading bay from a designated collection point, where all waste and recycling bins will be removed from the adjacent storage area and presented for servicing.

The area has been designed to ensure that all collection activities do not interfere with the movement of traffic both in and out of the basements below.

5.6.7 Servicing Arrangements – Waste Collections

All waste services will be provided by Fairfield Council using a collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner, that will aim not impact negatively on the principles of health, safety or convenience.

All waste services will take place within the site from the loading bay as detailed in Part 5.6.5.5 above.

Upon the collection vehicles arrival, a member of Council's collection team will remove the waste bins from the bin room and transport them to the rear of the collection vehicle where the bins will be loaded onto the bin lifter and the contents deposited into the body of the vehicle. The bins will be returned to the bin room as soon as servicing has been completed.

All waste services will be provided two (2) days per week on days to be determined by the Council.

All 14 x 660-litre mobile waste bins will be serviced on each collection day.

5.6.8 Servicing Arrangements – Recycling Collections

All recycling services will take place within the site from the loading bay as detailed in Part 5.6.5.5 on pages 28 and 29.

Upon the collection vehicles arrival, a member of Council's collection team will remove the recycling bins from the bin room and transport them to the rear of the collection vehicle where the bins will be loaded onto the bin lifter and the contents deposited into the body of the vehicle. The bins will be returned to the bin room as soon as servicing has been completed.

All recycling services will be provided one (1) day per week on a day to be determined by the Council.

All 25 x 240-litre mobile recycling bins will be serviced on each collection day.

5.7 GREEN WASTE

No formal green waste service will be provided to the development.

It will be the responsibility of the Owners Corporation to ensure that all green waste generated from the on-going use of the development is disposed of appropriately.

5.8 BULKY WASTE STORAGE

Secure storage spaces are required to be provided for each residential unit in accordance with the provisions of Council's DCP.

This space may be used to store bulky waste items that can be disposed of as part of any Clean Up services to be provided to this complex.

Consistent with these requirements, a bulky waste storage area has been provided for residents to place unwanted materials awaiting collection and removal.

This area will provide space for all residents of the complex. It is located on the ground floor next to the Consolidated Bin Room.

The area is a fully enclosed rectangular structure, partially constructed of caged wire and is fitted with a 1.5m double doorway. It has an area of approximately 26sqm.

All residents of the building will be provided with unrestricted 24-hour access to this facility.

The Building Manager / Caretaker will monitor this area regularly to ensure that all materials stored within its confines are done so in a manner that will not adversely impact on the health, safety, and convenience. Regular maintenance of this area will be carried out.

It will be the responsibility of the occupants of individual units, to dispose of this material, appropriately.

5.9 COMMUNITY FACILITY & CAFÉ

A Community Information and Education Centre (library) and ancillary café will be located on the northern side of the ground floor of the complex as indicated on the Architectural Drawings. The facility has a floor area of 357sqm.

Separate waste management arrangements will be provided for this facility.

Councils DCP does not provide for waste and recycling generation rates for land use activities such as these. Accordingly, waste and recycling generation rates have been calculated from information provided in the Better Practice Guide for Resource Recovery in Residential Buildings, published by the NSW EPA (April 2019), based on:

- Waste – Community Hall – 5-litres of space per 100sqm of floor area per day,
- Recycling – Community Hall – 10-litres of space per 100sqm of floor area per day,
- Waste – Café – 120-litres of space per 100sqm of floor area per day, and,
- Recycling – Café – 60-litres of space per 100sqm of floor area per day,

According to the above calculations the facility will need to incorporate the following waste management requirements:

- Waste – 2 x 240-litre waste bins, serviced one (1) day per week,
- Recycling – 2 x 240-litre recycling bins, serviced two (2) days per week,

All waste and recycling bins will be stored within the confines of a dedicated Waste Storage Area located on the ground floor as indicated on the Architectural Drawings.

The Building Manager or their authorised representative will be responsible for the transfer of waste and recyclable material at the conclusion of each day's activity and deposit the waste and recycling material into the appropriate bins located in the Waste Storage Area.

All waste and recycling services to the facility will be provided by Fairfield City Council.

All services will take place from the loading bay.

5.10 ON GOING OPERATION, USE & MAINTENANCE OF WASTE MANAGEMENT FACILITIES

All waste management facilities will be maintained in a clean and hygienic condition that will promote the principles of health, safety, and convenience.

In order to achieve these objectives, the following facilities and devices will be required: -

1. The walls and floors of the WSA are to be constructed of smooth faced masonry or concrete, and all walls will be painted with light coloured and washable paint.
2. The junction between all floors and walls will be coved and sealed up to 100mm above the floor level, in order to eliminate the build-up of dirt and grime.
3. A floor waste, connected to the Sydney Water drainage system in accordance with that Authority's requirements, will be provided to each storage area, and be graded to drain into it.
4. Appropriate washing facilities will be provided to each storage area, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.
5. All waste storage facilities will be washed and cleaned on a regular basis.

6. All mobile bins will be washed and cleaned on a regular basis.
7. All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.
8. Natural and mechanical ventilation will be required to be installed within all waste storage facilities, in accordance with the relative provisions of the Building Code of Australia.
9. Appropriate signage will be displayed throughout all basements clearly identifying waste and recycling bins and the waste and recycling bin rooms.
10. Appropriate signage will be erected within each storage area providing instruction to residents on how to use waste and recycling facilities, including what is and what is not recyclable.
11. The Owners Corporation will be responsible for ensuring that all waste and recyclable matter and materials are placed and stored within the appropriate containers provided.
12. The Owners Corporation will be responsible for ensuring that all waste management facilities and activities are provided, and carried out, in accordance with this Waste Management Plan.

PART 6 – SUMMARY

6.1 SUMMARY

In summarising this proposal, the following information is provided:

1. This Waste Management Plan (WMP) has been developed and documented in accordance with Councils DCP and advice from Council staff.
2. All residential waste and recycling services will be provided by Fairfield City Council.
3. The Owners Corporation will be responsible for ensuring that all on-going waste management activities are carried out in accordance with the provisions of this Waste Management Plan.
4. The WMP aims to promote the use of recyclable materials in the excavation, construction, and on-going operation of the building.
5. The WMP aims to ensure the design of waste and recycling storage facilities are of an adequate size, appropriate for the intended use of the building, hygienic with safe and manoeuvrable access.
6. The WMP aims to ensure that the provision of waste and recycling services to the completed buildings are carried out in an efficient manner, which will promote the principles of health, safety, and convenience.

The measures set out in this WMP aim to demonstrate that all such activities will be carried out effectively and efficiently, in a healthy, safe, and convenient manner, to acceptable community standards, and to the requirements of Fairfield Council.